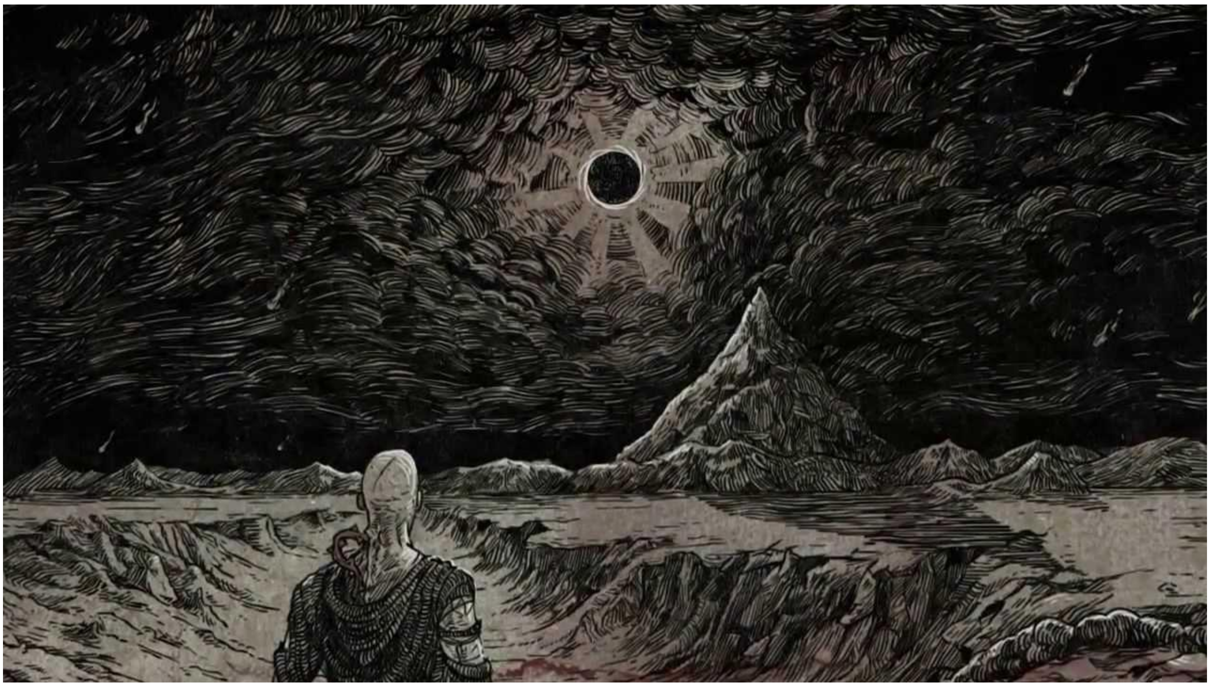
‘Carpe Noctem’ (seize the night) - A journey into Architectural Media



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A B S T R A C T

In recent years, rapidly developing technology in lighting, media and building materials has led to the creation of a new type of hybrid architecture – lighting and media appear as a layer that can be woven into a three dimensional space – simply known as media architecture.

In a wide sense, media architecture is any surface in the three dimensional built environment that contains a matrix of lights that are individually controllable.

This approach is fundamentally different to traditional architectural lighting and offers endless new opportunities in designing the built environment. This ethereal lighting layer has great impact on the human experience of space.

This paper explores the huge possibilities with regard to pushing the boundaries in media architecture as society moves towards ‘carpe noctem’, architecture and design.

A facade is a foreign loan word from the French *façade,* which means "frontage" or "face". It means generally one exterior side of a building, usually the front. In architecture, the facade of a building is often the most important aspect from a design standpoint, as it sets the tone for the rest of the building. From the engineering perspective of a building, the facade is also of great importance due to its impact on energy efficiency. For historical facades, many local zoning regulations or other laws greatly restrict or even forbid their alterations hence various NEW AGE methods came up for design displays on these. Urban interactions are the ways in which public space is constructed, made available, and governed. Whether through digital or physical means, designing interactions in these hybrid spaces is a research challenge that requires an interdisciplinary approach

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With its various facades, the city provides a challenging context for interaction design. The urban landscape here can be used to have a plethora of design interactions- from the embedded sensor, to the interactive media facade, to the mobile networks distributed throughout. Media architecture focuses primarily on the built environment, urban interactions tend to highlight the complex situations in multi-functional spaces. Situations include combined public and private spaces, multiple stakeholder involvement, civic life, and commercial activities whereas urban Interactions explore the design, the design processes, interfaces, and the use of urban space.

In the field of urban computer-based interaction, media architecture is an umbrella term for installations in which displays are integrated into architectural structures. Using media facades as a subcategory of urban computing it revolves around coming to grips with sense-making and social interaction as parts of identifying key characteristics of interactions with media facades in an urban setting. Apart from that it means attacking specific challenges of designing media architecture by on design research-through-design, conducting real-life design and interventions and various aspects of urban computing. Recent cases includes the very successful Danish Pavilion at the Shanghai Expo 2010.

The Danish Pavilion at the Shanghai Expo 2010

The Danish pavilion at the Shanghai Expo not only exhibited the Danish virtues by use of Architectural Media, but through interaction, the visitors were able to actually experience some of Copenhagen's best attractions – the city bike, the harbor bath, the playground and the picnic. The bike is a popular mean of transportation and a national symbol – common to Denmark and China. In recent years, however, it has had a very different fate in the two countries. While Copenhagen is striving to become the world's leading bike city, heavy motor traffic is on the rise in Shanghai, where the car has become a symbol of wealth.

At the Danish Pavilion the bike was relaunche as a symbol of modern lifestyle and sustainable urban development. The Pavilion and the entire exhibition could be experienced on city bikes that were free for the guests to use. The building was designed as a double spiral with pedestrian and cycle lanes taking visitor from the ground and through curves up to a level of 12 metres and down again. In this way they could experience the Danish exhibition both inside and outside at two speeds – as calm stroll or as a bicycle trip. Both Shanghai and Copenhagen are harbor cities. The polluting activities in the Copenhagen harbors have been replaced by harbor parks and cultural institutions, as the result, the water has become clean enough to swim in. In the heart of the pavilion the guests found the Harbour Pool. Children dappled their feet in the water experiencing a Danish city life where the water in the harbour is clean. In the middle of The Harbour Pool,the actual Little Mermaid from Copenhagen was placed exactly as she usually sits in Copenhagen. And in Copenhagen the place where the Mermaid sat was adorned by Chinese artist Ai Weise sculpture.

The sequence of events at the exhibition took place between two parallel facades – the internal and external. The internal was closed and contained different functions of the pavilion. The external facade, pavilion's façade outwards, was made of perforated steel. In the evening time, the indoor activity of the pavilion was illuminated for passers-by.

The Danish artist Jeppe Hein designed a 'social bench' that ran alongside the bicycle lane. In some places, the bench adapted to its environment elastically and different functions were added such as a bar for food and drink.

There are numerous challenges faced when designing urban media façades. The challenges concern a broad range of issues: interfaces, physical integration, robustness, content, stakeholders, situation, social relations, and emerging use. The challenges reflect the fact that the urban setting as a domain for interaction design is characterized by a number of circumstances and socio-cultural practices that differ from those of other domains. It can be vandalized due to changes in socio-cultural sensitivity of its passers-by; can be misaligned in a distinctive architectural grid due to its installation after the building's completion or can be disconnected due to a drastic change in the societal perception of its carrier building and can display no, or no original, content due to a lack of timely planning.[1]

> “Despite the inherent ‘dynamic’ character of media architecture, that is its theoretical ability to show anything, at any point in time, on any sort of surface, it is still confronted by issues of inadequate and inconsiderate integration when its context tends to change. Moreover, in spite of its claimed social, cultural, economic, architectural and urban qualities, media architecture is still considered as an embellishment, an artifact that can simply be added or switched off, or display no, or inappropriate, content. “ [IBID]

Media Architecture may comprise of the following:

1. Animated architecture: Projects demonstrating creative media facades solutions. Facades of buildings increasingly animated by integrated light sources. Designers focusing more and more on the perception of the building with flexibility of content is rather limited due to resolution, colour and shape of the pixels. In most cases the pixels are highly customized and present a creative challenge to the project.
2. “Money” and entertainment architecture: Projects incorporating buildings that are closely related to business, banks, shopping centres, entertainment and gambling. Lighting on building surfaces might be designed to attract people and encourage spending, or to represent the power of the institution, as in the case of banks for example.
3. Infrastructure and Participatory Architecture: Innovation and the impact on the city are essential characteristics of these projects that support the development of sustainable social structures with urban digital media or media architecture regardless of whether projects are made in an artistic or civic society or any other context. Examples: neighbourhood screens for sharing cars, tools, rooms, etc., and for offering local services like yoga, learning, etc.
4. Hybrid systems that consist of digital and social components.
5. Spatial media art: Projects produced in an artistic context at the intersection of architecture and media art. Mostly non-permanent movable installations with an innovative form of spatial interaction and/or perception of space.
6. Other trends & prototypes include special solutions like three-dimensional displays, kinetic facades, OLEDs or robotic elements that could shed light on what future media architectures might look like.

City Making Wien: Other recent example is: In 2018 CityMaking! Wien was designed as an online toolbox that facilitated the conception, design and submission of parklets in Vienna. With this tool a simple solution was made possible for the participation of citizens in the development of their neighbourhoods. At the moment **CityMaking!Wien** offers four different tools:

1. Basic information about parklets and what should be considered for the conception and construction of a parklet in Vienna, regarding the security, the design and other aspects.
2. A parklet potential map that shows where would be possible to build a parklet, by showing in red the different restrictions that apply for the use of parking places. The map simplifies the understanding of the regulations and offers a new understanding about public spaces. A design tool that facilitates the creation of the required drawings for the submission. The tool is very simple to use, yet it has considered many of the requirements regarding dimensions and security. People can also download the drawings and edit them according to their own visions.
3. An online submission tool that facilitates the contact with the authorities and the submission of the required documents to obtain a permit for the use of parking places.
4. These tools encouraged people to become active and submit their ideas using the online form. The final decision regarding the use of parking places was taken by the city of Vienna but the toolbox was a great example on how technology could trigger dynamics in cities, by providing new understandings of public spaces.

The field is still evolving, education to students in various workshops organised by international experts are arranged at events such as annual conferences. Parties from the professional field and the business sector will also be involved as partners in biennales.[2] Amsterdam and the Nordic countries seem to be focal points of Media architecture that seems to be spreading far and wide. Other institutes of higher education and universities from outside the region also contribute.

REFERENCE

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